

Title (en)

Method for determining the installed torque in a screw joint at impulse tightening and a torque impulse tool for tightening a screw joint to a predetermined torque level

Title (de)

Verfahren zum Feststellen des Drehmoments in einer mittels dreh Schlagverschraubten erzeugten Schraubverbindung und Drehschlag-Werkzeug zum Erzeugen einer Schraubverbindung mit vorgegebenem Drehmoment

Title (fr)

Procédé pour déterminer le couple installé dans une connection vissée par serrage à percussion et outil à percussion rotative pour serrer une connection vissée avec un couple prédéterminé

Publication

**EP 0911119 A2 19990428 (EN)**

Application

**EP 98850165 A 19981022**

Priority

SE 9703896 A 19971027

Abstract (en)

A basic method for determining the installed torque in a screw joint which is being tightened by a series of repeated torque impulses, wherein the rotational movement of the screw joint is detected during each impulse, the point in which the screw joint ceases to rotate is detected, and the actually applied torque is indicated the very instance the screw joint ceases to rotate. In a tightening process control application of the above described basic method, the per impulse increasing value of the installed torque is compared to a predetermined target value in a way known per se, and the tightening process is interrupted as the target value is reached. In a tightening process quality check application of the above described basic method, the accomplished angular displacements of the joint at repeated impulses are indicated and added, and high and low limit values for the final installed torque and the total angle of rotation are provided and compared to the actually obtained values. A torque impulse delivering power tool comprising an impulse generator (12) with an output shaft (13) having a torque transducer (23) and a rotation detecting device (24) both connected to a process control unit (33) in which a device is arranged to provide a torque target value and a comparing circuit is provided to compare the actual value of the installed torque with the target value and to initiate shut-off of the power supply to the power tool as the target value is reached. <IMAGE>

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CPC (source: EP US)

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Cited by

EP1250580A4; EP2256899A1; EP1257034A3; EP3632625A4; EP1000710A1; FR2785986A1; DE102011075859A1; EP1059145A3; US10418879B2; US10052733B2; WO2004018153A3; WO0147669A1; US7109675B2; US11491616B2; US10615670B2; US11784538B2; US11260517B2; US11707831B2; US10668614B2; US11602832B2

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